

Abstract:

Device for Atomizing and Comminuting Liquid Melts

5 The device for atomizing and comminuting liquid melts, including a slag tundish to whose outlet an expansion or cooling chamber is connected, whereby a propellant gas lance opens into the outlet, which propellant gas lance is surrounded by a tubular underflow weir immersed in the liquid
10 slag, is dimensioned such that the width of the gap between the lower edge of the underflow weir and the tundish bottom is smaller than 20%, preferably smaller than 15%, of the clear width of the outlet, that the bottom of the tundish in the region between the lower edge of the overflow weir and the
15 outlet is designed in a funnel-shaped manner, and that supercritical vapor is injected through the propellant gas lance to form an underexpanded free jet in the interior of the melt jet, the flow speed at the nozzle mouth of the lance being adjusted to sonic speed, thus ensuring a substantially
20 enhanced comminution performance. (Fig. 1)